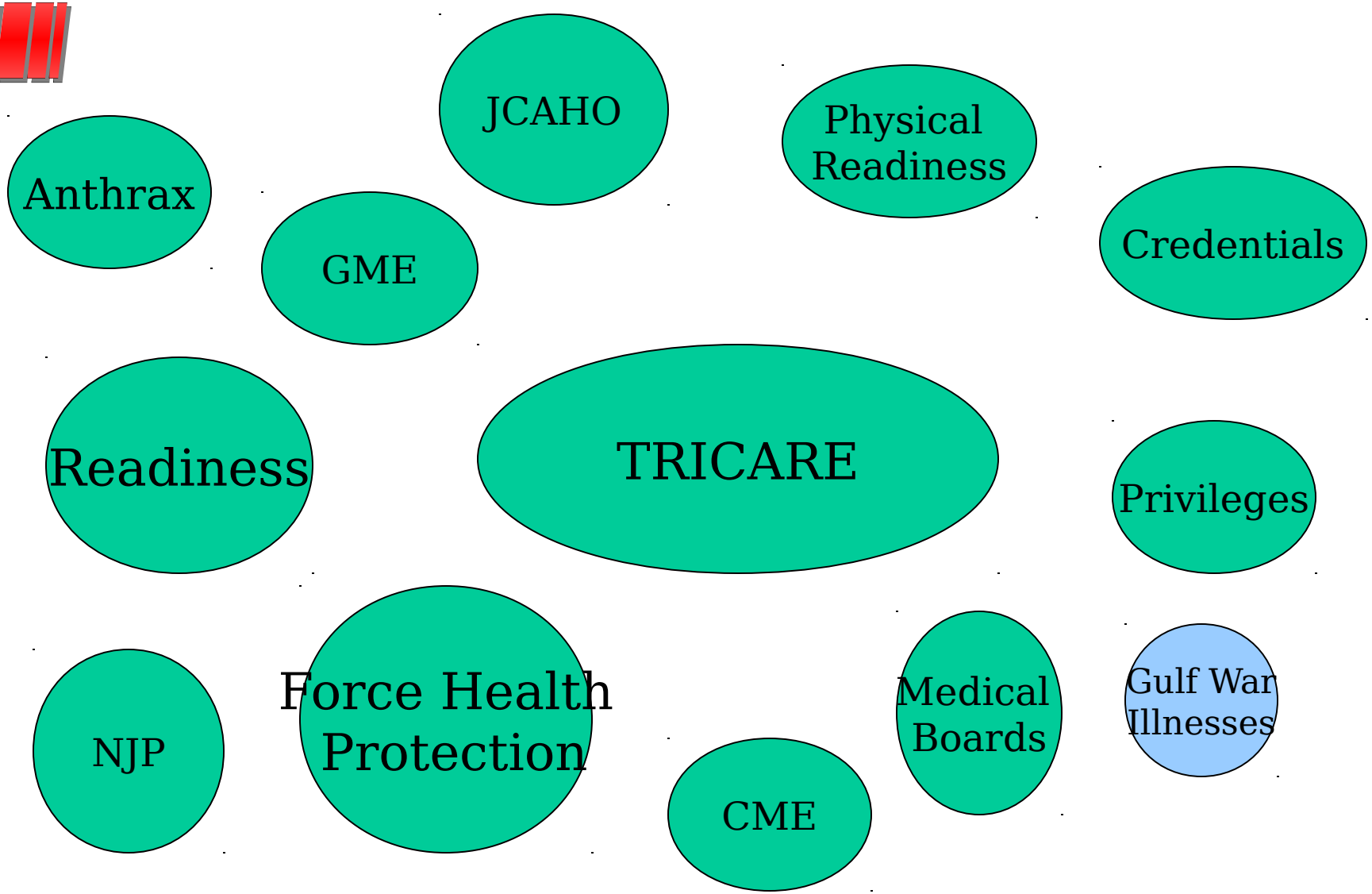
Office of the Special Assistant for Gulf War Illnesses

Francis L. O'Donnell
Colonel, Medical Corps, United States Army

Deputy Director, Medical Outreach and Issues
Office of the Special Assistant for Gulf War Illnesses
703-845-3374 fax 703-578-8501
email: fodonnel@gwillness.osd.mil


JCAHO
Physical Readiness
Anthrax
GME
Credentials
Readiness
TRICARE
Privileges
Force Health Protection
Medical Boards
Gulf War Illnesses
NJP
CME

Primer on Gulf War Illnesses

Special Assistant for Gulf War Illnesses

Dr. Bernard Rostker

- Appointed November 12, 1996 by the Deputy Secretary of Defense
- 180 team members

Mission of the Special Assistant

- Ensure Gulf War veterans are properly cared for: “people are our first concern”
- Investigate to understand and explain Gulf War illnesses: “leave no stone unturned”
- Ensure DoD adapts doctrine, policy and procedures to reduce risks for troops in the future.

Who Served in the Gulf War

697,000 U.S. service members

ARMY	50%
NAVY	23%
MARINE	15%
AIR FORCE	12%

259,000 Coalition Forces

Source: Presidential Advisory Committee on Veterans Illnesses, Final Report

Who Served in the Gulf War

MALE		93%
FEMALE	7%	
ACTIVE	83%	
RESERVE/NATIONAL GUARD		17%
OFFICER	10%	
ENLISTED	90%	

< 26 years old - 55%; 26-35 years old - 32%; > 35 years old - 1

Medical Support

Largest emergency health care system since WW

- 41,000 medical personnel
- 18,000 beds
  - 2 hospital ships
  - 63 combat zone hospitals

source: CENTCOM Publications - Commander-in-chief US CENTCOM “Desert Shield/Desert Storm Facts, Figures, Quotes and Anecdotes 7 AUG 90-11 APR 91,” prepared by CENTCOM PAO

Medical Support

- 27,000 hospitalizations in theater
- 8,000 medical evacuations
- ????? outpatient visits

U.S. Deaths

DNBI

224

Battle

148

Symptoms

Tiredness	Diarrhea
Rashes	Hair loss
Headaches	Memory loss
Muscle aches	Sleep disturbance
Joint pains	Depression
Abdominal pain	Concentration problems

Medical Evaluations

- Comprehensive Clinical Evaluation Program (CC

Total Participants	51,932
Decline examination	14,766
Examined	37,166

- Veterans Affairs Registry -examined

Total Examined

Source: OASD (Health Affairs) 31 March 1999 , VA Registry 30 November 1998

Diagnosis Distribution

Categories	CCEP (%)	VA Registry (%)
Healthy	10	12
Symptomatic	90	88
Medically explained	80	80
Medically unexplained	**20**	**20**

Distribution of CCEP Diagnoses by Major ICD-9 Categories

	Primary (%)	All Dx (%)
• Musculoskeletal	19.6	20.8
• Symp., Signs, IDC	17.4	19.0
• Psychological	17.3	14.8
• V-Codes	10.1	6.0
• Respiratory Sys.	6.5	5.9
• Digestive	6.1	7.3
• Skin	5.9	6.5
• Nervous System	5.5	5.9

Distribution of CCEP Diagnoses by Major ICD-9 Categories (cont)

	Primary (%)	All Dx (%)
• Infections	2.6	3.0
• Circulatory Sys.	2.5	2.8
• Endocr.-Metab.	2.3	2.7
• Genitourinary	1.3	1.8
• Injury-Poisoning	0.9	1.1
• Neoplasms	0.9	0.9
• Blood	0.6	0.9

Symptoms, Signs, and Ill Defined Conditions

- Malaise, Fatigue 4.2 %
- Sleep Disturbances 3.3 %
- General Symptoms and Hyperhidrosis 1.9 %
- Symp. Of Respiratory Sys. And Chest 1.6 %
- Symptoms involving the Skin 1.1 %
- Alterations of Consciousness, Awareness 0.6 %
- Abdom. Pain, Various Locations 0.4 %
- Symptoms of Digestive System 0.4 %

Physician Message Sent

"Your laboratory, x-ray and physical exams results are

Patient Messages Received

"There's nothing wrong with you!"
"It's all in your head!"
"You're faking these symptoms!"

Confounding Issues

- no clustering
- variable onset
- no symptom consistency
- no longitudinal evaluation

Epidemiology Studies

	Deployed (%)	Non-Deployed (%)
Medical separation (Aug 91 - Dec 93)	**2.20**	**2.56**
Hospitalizations (Aug 91 - Sep 93)	**21.6**	**21.6**
Hospitalizations unexplained illnesses (Aug 91 - Apr 96)	**1.21**	**1.27**
Birth Defects (Aug 91 - Sep 93)	**7.45**	**7.59**
Mortality (Aug 91 - Sep 93)	**.025**	**.023**

Possible Causes

CHEMICAL WARFARE **BIOLOGICAL WARFARE**

PESTICIDES **OIL WELL FIRES**

VACCINES **DEPLETED URANIUM**

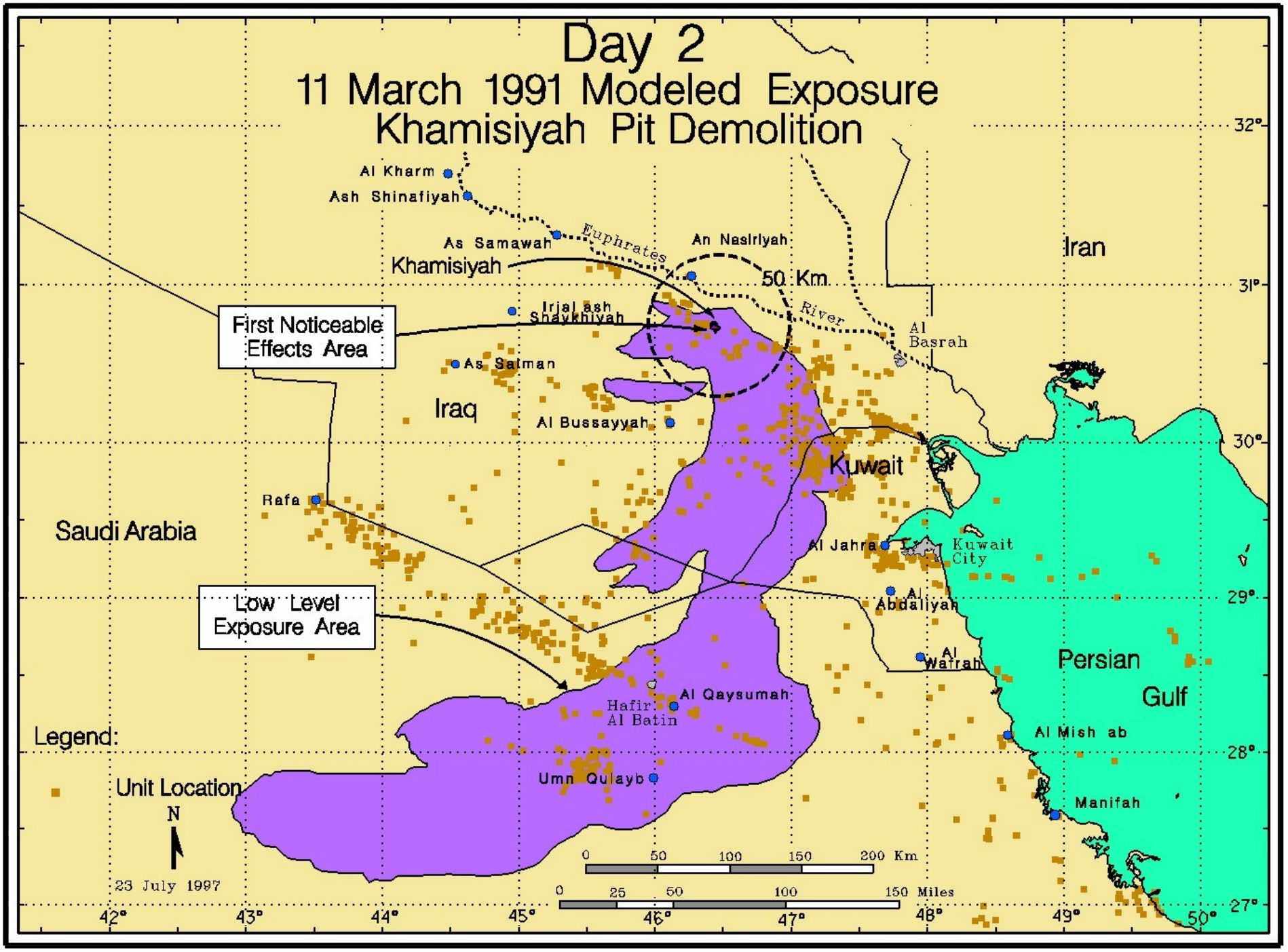
PYRIDOSTIMINE BROMIDE **INFECTIOUS DISEASES**

STRESS **COCKTAIL EFFECT**

Possible Causes - Lessons Learned

CHEMICAL WARFARE

- 14,000 M8 alarms, false positives
- in and out of MOPP, no explanations
- alarms turned off
- Khamisiyah Plume


Day 2
11 March 1991 Modeled Exposure
Khamisiyah Pit Demolition
Al Kharm
Ash Shinafiyah
As Samawah
Euphrates
An Nasiriyah
Khamisiyah
50 Km
River
Iran
Irjal ash Shaykhiyah
First Noticeable Effects Area
As Salman
Iraq
Al Bussayyah
Al Basrah
Kuwait
Rafa
Saudi Arabia
Al Jahra
Kuwait City
Low Level Exposure Area
Al Abdaliyah
Al Wafrah
Persian Gulf
Hafir Al Batin
Al Qaysumah
Al Mish ab
Umn Qulayb
Manifah
Legend:
Unit Location
N
23 July 1997
0 50 100 150 200 Km
0 25 50 100 150 Miles
32°
31°
30°
29°
28°
27°
42°
43°
44°
45°
46°
47°
48°
49°
50°

Possible Causes - Lessons Learned

CHEMICAL WARFARE

BIOLOGICAL WARFARI

- no positive cultures
- false positive anthrax test

Possible Causes - Lessons Learned

CHEMICAL WARFARE **BIOLOGICAL WARFARI**

PESTICIDES

- DEET, permethrin, organophosphates
- unapproved items: flea collars, SNIP

Possible Causes - Lessons Learned

CHEMICAL WARFARE

BIOLOGICAL WARFARE

PESTICIDES

OIL WELL FIRES

- EPA monitoring March 91
- particulates, no toxic fumes,

Possible Causes - Lessons Learned

CHEMICAL WARFARE

BIOLOGICAL WARFARE

PESTICIDES

OIL WELL FIRES

VACCINES

- routine deployment, < 40% complete
- ISG
- no announcement = secret
- botulinum toxoid, not FDA approved
- squalene

Possible Causes - Lessons Learned

CHEMICAL WARFARE

BIOLOGICAL WARFARI

PESTICIDES

OIL WELL FIRES

VACCINES

DEPLETED URANIUM

- tank armor, penetrators
- heavy metal, proximal tubul
- surveillance of most expose

Possible Causes - Lessons Learned

CHEMICAL WARFARE **BIOLOGICAL WARFARI**

PESTICIDES **OIL WELL FIRES**

VACCINES **DEPLETED URANIUM**

PYRIDOSTIGMINE BROMIDE

- soman prophylaxis
- not FDA approved use
- recognized side effects
- medical confusion

Possible Causes - Lessons Learned

CHEMICAL WARFARE

PESTICIDES

VACCINES

PYRIDOSTIGMINE BROMIDE

BIOLOGICAL WARFARE

OIL WELL FIRES

DEPLETED URANIUM

INFECTIOUS DISEASES

- 12 malaria, 32 leishmaniasis
- diarrhea, URI's
- *Mycoplasma fermentans incognitus*

Possible Causes - Lessons Learned

CHEMICAL WARFARE

BIOLOGICAL WARFARE

PESTICIDES

OIL WELL FIRES

VACCINES

DEPLETED URANIUM

PYRIDOSTIGMINE BROMIDE

INFECTIOUS DISEASES

STRESS

- NO DoD policy that “stress is the cause of symptoms”
- Profiles are stress of chronic disease
- PTSD rate lower than Vietnam
- Stress can amplify already existing symptoms

Possible Causes – Lessons Learned

CHEMICAL WARFARE

BIOLOGICAL WARFARE

PESTICIDES

OIL WELL FIRES

VACCINES

DEPLETED URANIUM

PYRIDOSTIGMINE BROMIDE

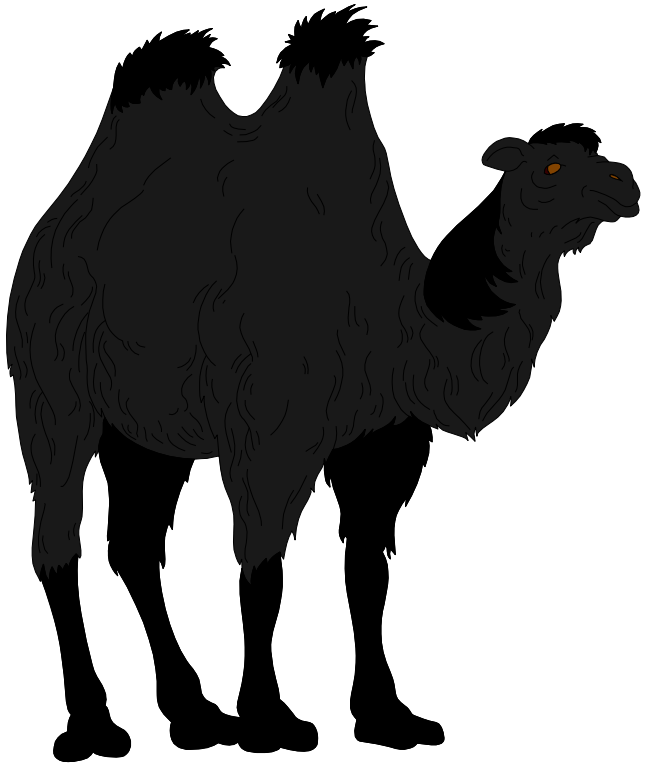
INFECTIOUS DISEASES

STRESS

COCKTAIL EFFECT

- No scientific evidence yet

THE BLACK CAMEL



Possible Causes

- Normal disease rate
- New disease paradigm - a Black Camel

Treating Patients with Medically Undiagnosed Illnesses "The Art of Medicine"

1. Develop a caring, concerned provider-patient relationship
2. Reassure the patient about what is not present: cancer infectious disease, diabetes, heart disease, kidney disease
3. Recognize stress is present - not the cause
4. Involve the patient and the family - friends

(continued)

Treating Patients with Medically Undiagnosed Illnesses "The Art of Medicine"

5. Shift focus from "What caused this?" to "How do I get better?"
6. Draw a "line in the sand" - the future starts on the other side of the line, the past stays behind the line
7. There is a massive, ongoing research program
   - $130 million to date for 140 research protocols
   - medical science frontier is being pushed
     - neurotransmitters
     - neuroimaging
     - neuroanatomy
     - low level combinations

Medical Personal Information Center (PIC)

Force Health Protection

Predeployment

- Medical threat briefing
- Distribute medical information
- Verify HIV test in last 12 months
- Verify current physical examination
- Verify DNA sample on file
- Predeployment serum sample
- Immunizations
- Predeployment health questionnaire

Deployment

- Daily and weekly disease/injury laboratory reporting
- Environmental monitoring
- Forward medical
- Immunization tracking
- Medical threat updates

Post Deployment

- Post deployment serum sample
- Post deployment health questionnaire
- Medical debriefs
- Screening exams as

Anthrax Vaccination Program

- Phase I - SWA and Korea (now)
- Phase II - Early deploying forces to SWA and Korea (8/99)
- Phase III - Total force (early 2000's)
- 254,459 vaccinated - 754,863 doses (April 99)
- 49 adverse reactions = 0.006% (April 99)
  - 23 systemic reactions, 26 local reactions
- Complete supplemental testing on vaccine prior to release
- Plant renovation completed.
- DoD anthrax web site: www.defenselink.mil/specials/Anthrax

Anthrax Vaccination

- What is Anthrax
- Is vaccine safe and necessary
  - FDA licensed on 1970
  - Used for many years to protect textile mill workers
  - Recommended by Centers for Disease Control (CDC)
    - Workers occupationally exposed to anthrax (labs, mills)
    - Treatment of anyone exposed to anthrax aerosols
    - only known pretreatment and protection against exposure

Office of the Special Assistant for Gulf War Illnesses

CONTACT NUMBERS

Department of Defense's - CCEP 800-796-9699

VA Persian Gulf Registry 800-749-8387

Department of Defense's 800-472-6719 Incident Reporting Line

Colonel Francis L. O'Donnell MC, USA
phone 703-845-3374 fax 703-578-8501
email: fodonnel@gwillness.osd.mil

Musculoskeletal / Conn. Tissue

- Pain in Joint 5.5 %
- Osteoarthrosis 3.6 %
- Back Pain and other Back Disorders 2.8 %
- Disord. of Tendons, Muscle Attachments 1.6 %
- Other Disorders of Soft Tissue 1.4 %
- Disc Disorders 1.0 %
- Knee Derangements 0.4 %

Psychological

- Depressive Disorder 2.9 %
- Neuroses 2.8 %
- Prolonged PTSD 2.6 %
- Affective Disorders 1.8 %
- Adjustment Reactions 1.2 %
- Sleep Disorders 0.6 %
- Organic Brain Syndromes, Various 0.5 %

Healthy

- Feared complaint, no diagnosis

  8.0 %

- Routine general medical examination

  0.9 %

Respiratory Tract

- Asthma 2.2 %
- Allergic Rhinitis 1.5 %
- Chronic Upper Respir. Inflammation 1.5 %

Gastrointestinal

- Irritable Colon 1.5 %
- Esophageal Reflux 1.3 %
- Enteritis and Colitis 0.6 %

Integument

- Alopecia, hirsutism, other dis. of hair 1.3 %
- Fungus infections of skin 1.3 %
- Contact dermatitis, other eczema 1.2 %
- Urticaria, various types 0.5%

Headache

- Tension Headache

  3.1 %

- Migraine 2.9 %

- Headache 2.5 %

Other

- Hypertension, essential 1.2 %
- Lipoid Metabolism Disorders 0.6 %
- Hearing Loss 0.4 %
- Hypothyroidism 0.4 %